In re application of: Cordiale et al

Serial Number: 10/773, 550

Page 2 of 16 Pages

**AMENDMENT A** 

**SPECIFICATION AMENDMENTS** 

Please enter the following amendments to the Specification as follows:

Please amend the disclosure at page 3, line 24 as follows:

For the magnetic force to be able act upon an object, the object generally is required to be magnetic: e.g., have those properties that are responsive to magnetic forces or fields. The incorporation of ferromagnetic material, such as an iron-based alloy, can also provide these magnetic/polar properties. The object can also obtain these properties through the incorporation of a wire coil set that can be energized to create an electromagnetic field or force (i.e., a solenoid inside a solenoid).

Please amend the disclosure at page 3 line 26 as follows:

Correspondingly, when current in the coil moves the magnetic material, the movement of the magnetic material proximate to the coil will create a current in the wire. That magnetic material creates a current that opposes or counters the original current flowing through the wire and is therefore referred to a counter or back Electromotive Force (e.g., CEMF) Counter EMF (CEMF) occurs when a magnetic object, by passing near an electrically conductive wire coil, generates a corresponding electrical current within that wire coil set. This CEMF occurs within a solenoid when a magnetic object moves within a non-energized wire coil set of a solenoid, creating an electrical current in the otherwise non energized wire coil set.

Another manifestation of the Counter EMF (CEMF) starts when the electrical current is first sent through a wire coil set which has some form of built in resistance. The majority of the kinetic energy of the electrical current is stored as energy in the resulting magnetic field (the remainder of the kinetic energy is lost as heat). When the electrical current no longer passes through from the wire, the magnetic field collapses and returns its kinetic energy as electrical current or a voltage spike to the otherwise de energized wire coil set.

In re application of: Cordiale et al

Serial Number: 10/773, 550

Page 3 of 16 Pages

Please amend the disclosure at page 6, line 10 as follows:

The prior art also neither addresses nor provides for "dwell angle" or Another issue for the proper operation of solenoid-based devices may be the variable control of the time duration for the energizing of the individual wire coils sets. Dwell angle is important for controlling the actual time that electricity is passing through the wire coil sets. This variable control may be [[is]] used to adjust the length of time that electricity passes through a particular wire coil (e.g., duration of the energizing for a wire coil) and may be used to prevent a significant increase in [[the]] an electrical current giving way to resulting resistance and corresponding energy loss ([[i.e.]] e.g., mechanical, magnetic and electrical).

Please amend the disclosure at page 16, line 14 as follows:

This action causes the energizing of the respective wire coil set 22 and [[crates]] <u>creates</u> the magnetic...

Please amend the disclosure at line 17, page 19 as follows:

In various embodiments of the invention 1, [[an]] sine/square wave audio generator replaces the 12-30 DC volt electrical power supply of the external power sub-circuit 51. A sine/square wave audio generator produces electrical [[audio]] signals similar to those produced by stereos to cause the solenoid in an audio speaker to operate. It does this by varying the voltage in the electrical current. When the [[audio]] electrical signal reaches the speaker, it causes an electrical wire coil set to move a permanent magnet attached to the speaker diaphragm. The movement of the permanent magnet, in relation to the voltage changes in the audio signal, moves the attached diaphragm to produce sound such as music. The [[audio]] electrical signals used in such energizing can be of a low amperage, allowing the invention 1 to be used in a greater variety of applications require a smaller output power source.

In the preferred embodiment, a Model 3001, 20Hz-150 kHz [[Sin/Square]] sine/square wave audio generator, from BK Precision, 1031 Segovia Circle, Placentia, Ca. 92870-7173 is used. A switch or gate allows such [[audio]] electrical signals to pass through the wire coil

In re application of: Cordiale et al Serial Number: 10/773, 550

Page 4 of 16 Pages

set(s) 22. This switch or gate, as known to those skilled in the art, would be selected to allow it to be incorporated into the wire coil set energizing sub-circuit 22.